

ABSTRACT

The invention relates to an analytical chromatographic method which comprises the steps of:

- 5 a) providing a membrane type flow matrix attached to a liquid-impervious backing, which flow matrix permits a capillary force assisted lateral fluid flow therethrough, and at least a part of which flow matrix contains ion-exchange functions;
- b) treating the flow matrix to reduce or eliminate unspecific adsorption properties of the flow matrix;
- 10 c) applying to the flow matrix a sample containing at least two components;
- d) initiating a first lateral flow of aqueous fluid to transport the sample through the flow matrix and separate said components therein;
- e) interrupting the lateral flow; and either
- f1) detecting at least one of the separated components on the flow matrix in the position
15 reached by the respective component when the flow was interrupted; or
- f2a) initiating a second flow of aqueous fluid to transport the components in a direction substantially transverse to the direction of the first lateral flow;
- f2b) interrupting the second lateral flow; and
- f2c) detecting at least one of the separated components on the flow matrix in the
20 position reached by respective component when the flow was stopped.

The invention also relates to a chromatographic device comprising a membrane type flow matrix attached to a liquid-impervious backing, which membrane permits a capillary force assisted lateral fluid flow therethrough and at least a part of which is modified to support ion-exchange functions.

ABSTRACT OF THE DISCLOSURE

The present invention is drawn to a chromatographic assay method, comprising the steps of: a) providing a polymeric membrane type flow matrix, which permits a capillary force assisted lateral flow therethrough, and at least a part of which contains ion-exchange function; b) treating the flow matrix to reduce or eliminate nonspecific adsorption; c) applying a sample containing at least two components; d) initiating a first lateral flow of aqueous fluid to transport the sample through the flow matrix and separate the components; e) interrupting the lateral flow; and either f1) detecting at least one of the separated components in the position reached when the flow was interrupted; or f2a) initiating a second flow of aqueous fluid to transport the components in a direction substantially transverse to the direction of the first lateral flow; f2b) interrupting the second lateral flow; and f2c) detecting at least one of the separated components in the position reached when the second lateral flow was interrupted. The present invention is further drawn to a chromatographic device having a membrane type flow matrix which permits capillary force assisted lateral fluid flow therethrough and is modified to support ion-exchange functions.